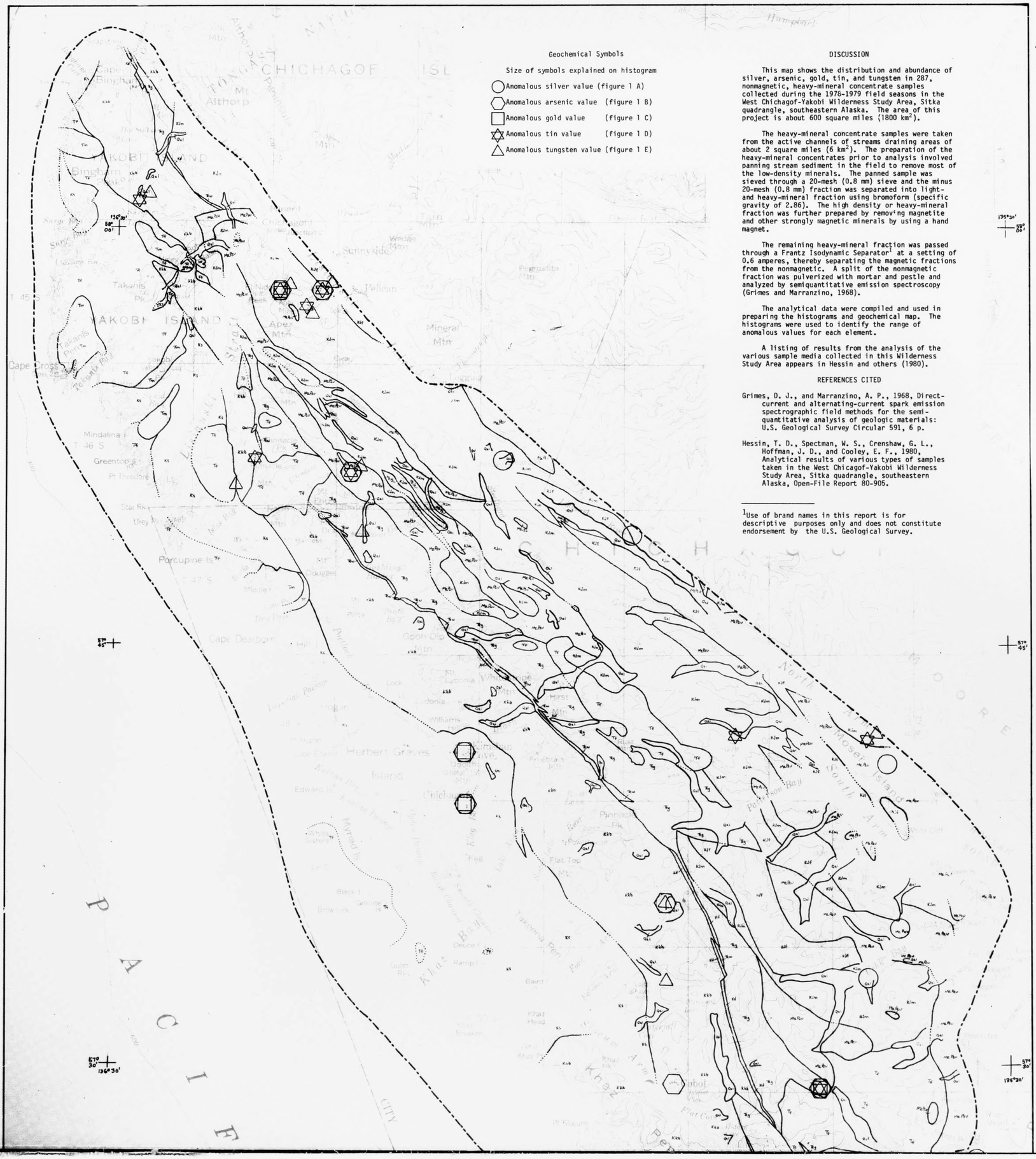
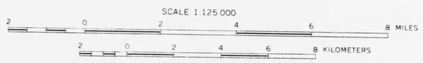

Geochemical Symbols
Size of symbols explained on histogram
Anomalous silver value (figure 1 A)
Anomalous arsenic value (figure 1 B)
Anomalous gold value (figure 1 C)
Anomalous tin value (figure 1 D)
Anomalous tungsten value (figure 1 E)
136°30'
58° 00'
135°30'
57° 45'
57° 30'
136°30'
135°30'
PACIFIC
Cape Dearborn
Porcupine Is
Greentop
Mindalina I
Star Rk
Herbert Graves Island
Takanis Pen
Takanis Pt
Apex Mtn
Mineral Mtn
Sunnyside
Pelican
Althorp
Binghan
Khaz Head
Flat Top Mt
Pinnacle Pk
Baird
Deception
Outer Rk
Middle I
Douglas
Lock
Williams
Hirst
Lyconia
Goon Dip
Mt Moser
North Arm
South Arm
Port Houghton
Khaz Bay
Khaz Peninsula
Port Conclusion
Khaz Arm
Khaz Passage
Khaz Reef
Khaz Rock
Khaz Rocks
Khaz Point
Khaz Island
Khaz Head
Khaz Peninsula
Khaz Bay

QUADRANGLE LOCATION

INDEX SHOWING LOCATION OF STUDY AREA

Base from U. S. Geological Survey 1:250,000, 1951
Sitka; Mt. Fairweather

Geology simplified by B. R. Johnaon and S. M. Karl, 1981



GEOCHEMICAL MAP SHOWING THE DISTRIBUTION AND ABUNDANCE OF SILVER, ARSENIC, GOLD, TIN, AND TUNGSTEN IN THE NONMAGNETIC, HEAVY—MINERAL CONCENTRATE SAMPLES IN THE WEST CHICHAGOF—YAKOBI WILDERNESS STUDY AREA, SITKA QUADRANGLE, SOUTHEASTERN ALASKA

Studies Related to Wilderness

The Wilderness Act (Public Law 88-577, Sept. 3, 1964) and related Acts require the U.S. Geological Survey to survey certain areas on Federal lands to determine their mineral resource potential. Results must be made available to the public and be submitted to the President and the Congress. This report presents the results of a geochemical survey of the West Chicagof-Yakobi Wilderness Study Area, Sitka quadrangle, southeastern Alaska.

By

T.D. Hessin, M.G. Maslowski, and G.W. Day

1981

CORRELATION OF MAP UNITS

Qal	QUATERNARY
Tf, Tm	TERTIARY(?)
Kd	CRETACEOUS(?)
Ks	CRETACEOUS
Kkb	CRETACEOUS
KJf, KJm	CRETACEOUS AND JURASSIC
Trw	TRIASSIC(?)
Trg	TRIASSIC(?)
MzPzu	MESOZOIC AND PALEOZOIC(?)

LIST OF MAP UNITS

Qal	ALLUVIAL DEPOSITS--Undivided
Tf	FELSIC PLUTONIC ROCKS--Dominantly tonalitic
Tm	MAFIC PLUTONIC ROCKS--Dominantly gabbroic
Kd	DIORITE SILL--Extensively altered
Ks	SITKA GRAYWACKE
Kkb	KELP BAY GROUP--Metasediments and metavolcanics
KJf	FELSIC PLUTONIC ROCKS--Dominantly granodiorite
KJm	MAFIC PLUTONIC ROCKS--Dominantly quartz diorite, diorite, and gabbro
Trw	WHITESTRIPE MARBLE
Trg	GOON DIP GREENSTONE
MzPzu	UNDIVIDED METASEDIMENTARY--Metavolcanic and metaplutonic rocks

Figure 1-B.--Histogram for arsenic in 287, nonmagnetic, heavy-mineral concentrate samples from the Chichagof-Yakobi Wilderness Study Area. Symbols denote anomalous concentrations and class percentages computed on total sample population. Analysis by optical emission spectroscopy (Grimes and Marranzino, 1968). Ninety-eight percent of the samples have no reported values. The remaining two percent (7 samples) have values ranging from 300 to 10,000 parts per million.

N, not detected at limit of detection

Values shown at sample site

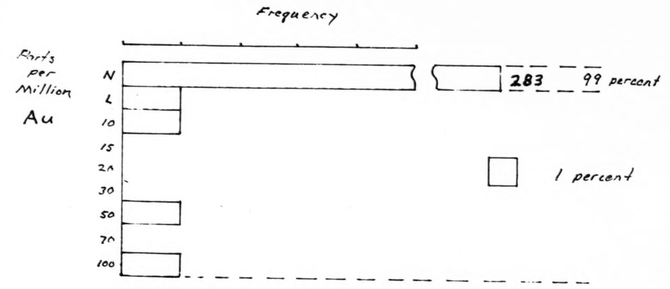


Figure 1-C.--Histogram for gold in 287, nonmagnetic, heavy-mineral concentrate samples from the Chichagof-Yakobi Wilderness Study Area. Symbols denote anomalous concentrations and class percentages computed on total sample population. Analysis by optical emission spectroscopy (Grimes and Marranzino, 1968). Ninety-nine percent of the samples have no reported values. The remaining one percent (4 samples) have values ranging from less than 5 to 100 parts per million.

N, not detected at limit of detection

Values shown at sample site

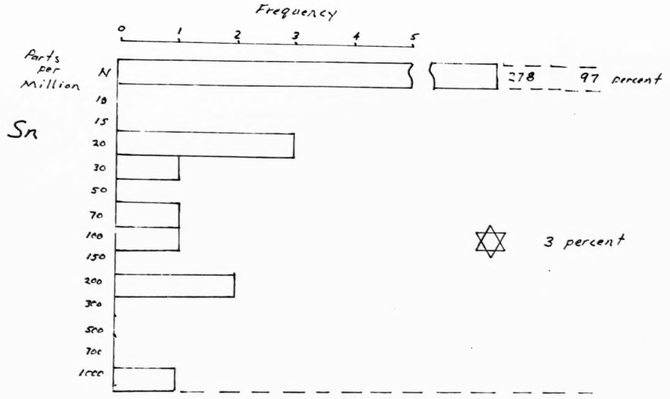


Figure 1-D.--Histogram for tin in 287, nonmagnetic, heavy-mineral concentrate samples from the Chichagof-Yakobi Wilderness Study Area. Symbols denote anomalous concentrations and class percentages computed on total sample population. Analysis by optical emission spectroscopy (Grimes and Marranzino, 1968). Ninety-seven percent of the samples have no reported values. The remaining three percent (5 samples) have values ranging from 20 to 1,000 parts per million.

N, not detected at limit of detection

Values shown at sample site

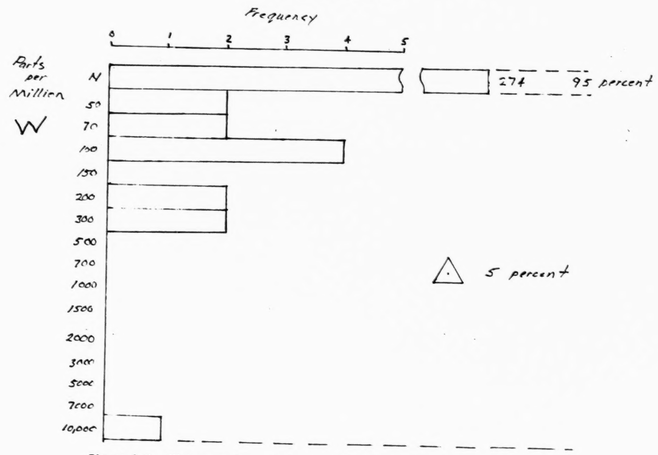


Figure 1-E.--Histogram for tungsten in 287, nonmagnetic, heavy-mineral concentrate samples from the Chichagof-Yakobi Wilderness Study Area. Symbols denote anomalous concentrations and class percentages computed on total sample population. Analysis by optical emission spectroscopy (Grimes and Marranzino, 1968). Ninety-five percent of the samples have no reported values. The remaining five percent (13 samples) have values ranging from 50 to 10,000 parts per million.

N, not detected at limit of detection

Values shown at sample site